Bruhat Bengaluru Mahanagara Palike

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Name of work:-Modified Estimate for Construction of RO plant And other development works at JPN Colony Census block no 89/1,89/2 in Chowdeshwari ward No-02 of Yelahanka Sub division.

Agency:-SRI.AKSHAY KUMAR H.B, (Akshay Constructions),No:209,Honnenahalli Village,Doddaballapura Main Road,Yelahanka,Bangalore-560064.

Modified Cost RS :- 26.11 Lakh's

BRUHAT BANGALORE MAHANAGARA PALIKE

Yelahanka Division

Name of work:-Construction of RO plant And other development works at JPN Colony Census block no 89/1,89/2 in Chowdeshwari ward No-02 of Yelahanka Sub division.

S.No	Description of Item	Unit	No	L	B	D	Qty	Estimate Cost RS / Rate	26.11 Lakh's / Amount
1	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. Depth exceeding 1.5m, but not exceeding 3 m								
	Sump	Cum	1	2.40	2.40	1.80	10.37		
	Desilting of drains		2	165.00	0.55	0.55	99.83		
	Debries cleaning In Temple Side		1	4.95	1.80	1.50	13.37		
							123.56	225.45	**27856.15**
2	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates.Specification								
	Sump	Cum	1	2.40	2.40	0.20	1.15		
							1.15	6516.38	**7506.87**
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) Mix 1:2:4 (M15) Using 20 mm nominal size graded crushed coarse aggregates								
	Coping Concrete:-Long wall	Cum	2	6.50	0.20	0.05	0.13		
	short wall		2	4.65	0.20	0.05	0.09		
	Front Concrete		1	4.65	3.10	0.06	0.86		
							1.09	6906.10	**7513.15**
4	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations and other similar works etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.								
	Earth Work Excavation	Cum	From Item No. 1				123.56		
	Deductions(-)								
	Sump		1	2.40	2.40	1.80	10.37		
							113.19	181.26	**20516.82**
5	**Loading and Unloading of Stone Boulder**/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 14 m3)								
	Excavated Earth	Cum	From Item No. 1+4				236.75		
							236.75	97.43	**23066.36**
6	Cost of Haulage Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km								
		T.Km		236.75		1.28	303.04		
							303.04	121.12	**36703.89**

7	Providing and laying in position Reinforced cement concrete for all **Sub structures of building,** Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates								
	sump:-Bottom Slab	Cum	1	2.40	2.40	0.30	1.73		
	Side Walls		2	2.40	0.20	1.80	1.73		
			2	2.10	0.20	1.80	1.51		
	Cover Slab		1	2.40	2.40	0.15	0.86		
	Inverted Beam:-Longer span		2	5.20	0.30	0.60	1.87		
	Shorter Span		2	3.10	0.30	0.60	1.12		
							8.82	7706.96	**67975.39**
8	Providing and laying in position Reinforced cement concrete for all **Super structures of building** , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates.								
	Column's	Cum	4	0.45	0.20	3.45	1.24		
							1.24	8090.19	**10048.02**
9	Providing and laying in position Reinforced cement concrete for all **Super structures of building** , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates.								
	Lintels :-Long wall's	Cum	2	5.20	0.15	0.20	0.31		
	Short wall's		2	3.10	0.15	0.20	0.19		
	Chejja's		1	1.20	0.45	0.10	0.05		
							0.55	8825.67	**4871.77**
10	Providing and laying in position Reinforced cement concrete for all **Super structures of building** , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates								
	Roof Slab	Cum	1	4.65	3.60	0.12	2.01		
							2.01	8825.67	**17729.01**

11	Providing and laying in position Reinforced cement concrete for all **Super structures of building** , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates								
	Beam:-Longer Span	Cum	2	5.10	0.20	0.30	0.61		
	Shorter Span		2	3.10	0.20	0.30	0.37		
							0.98	8825.67	**8684.46**
12	Providing and laying in position plain cement concrete for levellingcourse for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately)Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates.								
	Flooring	Cum	1	3.00	4.65	0.12	1.67		
							1.67	6713.51	**11238.42**
13	Providing Thermo-Mechanically Treated bars of grade Fe-550 Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members whereever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications. (The laps and wastages shall not be measured separately)								
		Kg's	1	13.61	150		2041.02		
							2041.02	108.76	**221981.34**
14	Providing and constructing load bearing wall with solid concrete blocks of size 400X200X200mm having block density not less than 1800kg/m3 having a minimum average compressive strength 5.00N/mm2 confirming to IS 2185 (part 1) :2005 and constructed with cement mortar 1:4,as per IS 2572:2005 including cost of materials, labour charges, scaffolding, curing, hire charges of machinaries etc., complete as per specifications.								
	Long wall	Sqm	2	5.20		2.40	24.96		
	Short wall		2	3.10		2.40	14.88		
	Front Damaged walls		1	12.00		0.60	7.20		
							47.04		
	(-)Deduction								
	RS		1	1.95		2.10	4.10		
	W		1	0.90		1.20	1.08		
							5.18		
							41.87	1484.09	**62131.43**
15	Providing and constructing load bearing wall with Solid Concrete blocks of size 400x150x200mm having block density more than 1800kg/m3 and minimum compressive strength of 4.00 N/mm2 conforming to IS 2185 (Part - I) - 2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials, labour, scaffolding and curing, usage charges of machinery etc complete as per specifications.								
	Parapet wall:-long wall	Sqm	2	5.20		0.60	6.24		
	short wall		2	3.10		0.60	3.72		
							9.96	1394.59	**13890.12**
16	Providing 18 mm cement plaster in two coats under layer 12 mm thick cement plaster with cement mortar 1:5 (1 cement : 5 coarse sand) and a top layer 6 mm thick cement plaster with cement mortar 1:3 (1 cement: 3 coarse sand) finished rough with sponge to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge								
	External Plastering:-Long wall	Sqm	2	3.50		4.65	32.55		

	Short wall		2	5.20		4.65	48.36		
							80.91		
	(-)Deduction								
	RS		1	1.95		2.10	4.10		
	W		1	0.90		1.20	1.08		
							5.18		
							75.74	436.16	**33032.58**
17	Providing 12mm thick cement plaster in single coat with cement mortar 1:4 , to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.								
	Internal Plastering:-First Floor	Sqm	2	4.65		2.75	25.58		
			2	3.00		2.75	16.50		
	Cealing		1	3.00	4.65		13.95		
							56.03		
	(-)Deductions								
	RS		1	1.95		2.10	4.10		
	W		1	0.90		1.20	1.08		
							5.18		
							50.85	365.92	**18607.03**
18	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete as per specifications and as per directions of Engineer in charge.								
	Internal Plastering	Sqm	Quantity Vide item No-15				50.85		
							50.85	113.29	**5760.80**
19	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :Two coats on new work after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.								
	Internal Painting:-First Floor	Sqm	2	4.75		2.70	25.65		
			2	3.10		2.70	16.74		
	Cealing		1	3.10	4.60		14.26		
							56.65		
	(-)Deductions								
	RS		1	1.95		2.10	4.10		
	W		1	0.90		1.20	1.08		
							5.18		
							51.48	130.28	**6706.16**
20	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications.								
	External Painting:-Long wall	Sqm	2	3.50		4.00	28.00		
	Short wall		2	5.20		4.00	41.60		
							69.60		
	(-)Deduction								
	RS		1	1.95		2.10	4.10		
							4.10		
							65.51	201.65	**13209.08**
21	Providing and laying 52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per direction of Engineer incharge.								

	Damaged stretches Hardner Concrete:-	Sqm	1	4.20	2.70		11.34		
							11.34	906.31	**10277.56**
22	Providing and fixing 1st quality ceramic glazed floor tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per m2 including pointing in white cement mixed with pigment of matching shade complete.								
	Damaged Stretches	Sqm	1	1.00	1.50		1.50		
			50% Of Quantity				**0.75**	1252.98	**939.74**
23	Providing skirting, dadooing, rises of steps with colour glazed tiles 6mm thick on 10mm thick cement plaster 1:3 and jointed with white cement slurry over existing rough plaster surface using glazed tiles of approved make and size including cost of materials, labour, complete as per specifications.								
	Wall cladding Tiles:-	Sqm	2	1.00		2.10	4.20		
			2	1.50		2.10	6.30		
							10.50		
	(-)Deductions								
	D1		1	0.75		2.10	1.58		
	V		1	0.75		0.45	0.34		
							1.91		
							8.59		
			65% Of Quantity				**5.58**	1641.56	**9162.98**
24	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete. Fixed to openings / wooden frames with rawl plugs screws etc.								
	W	Kg	1	0.75		0.90	0.68		
							0.68		
			21kg per sqm				**14.17**	207.32	**2937.72**
25	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two coat applied @ 0.90 ltr/10 m² over an under coat of primer applied @ 0.80 ltr/10 m² of approved brand and manufacture including preparing the surface after thorougly cleaning oil, grease, dirt and foreign matter, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.								
	W	Sqm	1	0.75		0.90	0.67		
							0.67	157.47	**105.50**
26	Providing & fixing of 3-track x 2-panel sliding windows made out of multi chambered UPVC(Matching to RAL-9016) sections and with minimum TiO2(Titanium Dioxide) at 6PHR with TPE(Thermo Plastic Elastomer) and lead free, gaskets -grey colour having isolated drainage and reinforced with Galvanized Iron profile through-out the window frame. The outer frame having an overall size of 108mm width x 45mm height with reinforcement of 1mm thickness and Sash with overall size of 39mm x 75mm with GI reinforcement of 2mm and mesh sash of size 37mm x 58mm. Coextruded Glazing bead for fixing of glass shall be of size 20mm x 24 mm. Windows shall be provided with 6mm plain float glass, standard hardware& Multi point locking system with touch lock. Wall thickness of frame & sash shall be of 2mm-2.5mm. Maximum possible size – 2419mm x 2200mm. (The cost is inclusive of all fixtures and separate charges for minor T&P's shall not be made).								
	W	Sqm	1	0.90		1.20	1.08		
	D		1	1.95		2.10	4.10		
							5.18	7628.88	**39479.45**
27	Providing and laying water proofing treatment to the Water tanks & Liquid Retaining structures with two component acrylic polymer modified cementitious waterproofing membrane with minimum elongation of 50% applied @ 1.5 kg/m2 for internal side waterproofing in two layers with waiting period of 4-6 hrs per layer and food grade epoxy coating in two coats certified by CFTRI Mysuru, including surface preparation completely as per specification & with a 10 years warranty on product & work from certified manufacturers as per the direction of the Engineer In								
	Sump Inside	Sqm	1	2.40	1.50		3.60		

							3.60	574.38	**2067.77**
28	Providing and fixing on wall face unplasticised rigid PVC rain water pipes conforming to IS:13592 Type A, including jointing with seal ring conforming to IS:5382, leaving 10mm gap for thermal expansion, [i] single socketed pipes 100mm diameter								
	Rain Water pipes	Mtr	2	3.60			7.20		
							7.20	329.67	**2373.62**
29	Providing and laying water proofing treatment to the Water tanks & Liquid Retaining structures with two component acrylic polymer modified cementitious waterproofing membrane with minimum elongation of 50% applied @ 1.5 kg/m2 for internal side waterproofing in two layers with waiting period of 4-6 hrs per layer and food grade epoxy coating in two coats certified by CFTRI Mysuru, including surface preparation completely as per specification & with a 10 years warranty on product & work from certified manufacturers as per the direction of the Engineer In								
	Roof Area	Sqm	1	6.00	4.65		27.90		
							27.90	574.38	**16025.20**
30	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x0.90 mm M.S. laths with 0.90 mm thick top cover including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.								
	Rolling Shutter	Sqm	1	1.95		2.10	4.10		
							4.10	2982.90	**12214.98**
31	Providing and placing on terrace(at all floor levels), polyethylene water storage tanks as per IS 12701 marked,with cover and suitable locking arrangement and making necessary holes for inlet,outlet and overflow pipes but without fittings and the base support for tank(For 1000 litre capacity)								
	Sintex	Ltr	2000				2000.00		
							2000.00	10.20	**20400.00**
32	Supplying and installation of 2000 LPH RO drinking water treatment plant comprising of raw water strorage tank,anti rolling closing system with pump & tank sand filler activated carbon filter,High pressure pump,R.O membranes,R.O.Pressure Tubes, Skid house the complete R.O plant,control panel,Chemical cleaning tank,Ph dosing system with pump and dosing tank product water storage UV Sterilizer Interconnecting piping with SKID,complete instrumentation with necessary gauges and flow indicator as required in the plant with PH meter etc..								
		Nos.	1				1.00		
							1.00	1081395.00	**1081395.00**
33	PTMT grating 100 mm dia..								
	Grating	Each	3				3.00		
							3.00	18.13	**54.39**
34	Providing and fixing brass bib cock of approved quality : 20 mm nominal bore.								
	Bib Cock	Nos.	4				4.00		
							4.00	345.53	**1382.12**
35	Providing and fixing brass stop cock of approved quality : 20 mm nominal bore.								
	Stop Cock	Nos.	4				4.00		
							4.00	345.53	**1382.12**
36	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete : 20 mm nominal bore.								
	Valve	Nos.	6				6.00		
							6.00	355.73	**2134.38**

37	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete. (Concealed work including cutting chases and good the walls etc.,) 20mm nominal dia pipes.								
	Pipe	Mtr	1	30.00			30.00		
							30.00	429.37	**12881.10**
38	Providing and fixing on wall face unplasticised rigid PVC rain water pipes conforming to IS:13592 Type A, including jointing with seal ring conforming to IS:5382, leaving 10mm gap for thermal expansion, [i] single socketed pipes 100mm diameter								
	Rain Water pipes	Mtr	2	3.60			7.20		
							7.20	329.67	**2373.62**
39	Supply and delivery of Centrifugal pumpset at site brand new best make and with discharge duty confirming to ISI standards and its latest amendments2 HP, Size 50x40 Head 22M, Discharge 186 LPM.								
	Motor	Each	1				1.00		
							1.00	19791.59	**19791.59**
	Electrical Work								
40	Open conduit System: Supplying heavy gauge PVC conduit pipe ……dia confirming to IS 2509 with suitable size bends, plugs in case of RCC ceiling and RCC wall stone structure or rawl plugs in case of brick walls and cement plastering damaged portion using heavy gauge saddles at an interval of 700mm using WF screws.a) 19/20mm dia 2mm thick								
		Mtr	1	145.00			145.00		
							145.00	71.06	**10303.70**
41	Supplying and flush mounting teak wooden box without front plank, made of not less than 15mm thick wood, after due groove cutting, necessary masonry patch work complete. d)8''x6''x3''(203x152x76mm)								
		Each	2				2.00		
							2.00	88.57	**177.14**
42	Point wiring using copper wire with switch Supplying and wiring adopting loop system in existing PVC Conduit/casing caping using Copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixied on the exisiting plastic sheet /gang box, the pther end of the wires shall be terminated with sufficient loose length in a wood/PVC round block.complete for each outlet. I. Point wiring using class A materials a) Short point upto 3Mtr from tapping point to out let via switch								
		Point	2				2.00		
							2.00	293.52	**587.04**
43	Point wiring using copper wire with switch Supplying and wiring adopting loop system in existing PVC Conduit/casing caping using Copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixied on the exisiting plastic sheet /gang box, the pther end of the wires shall be terminated with sufficient loose length in a wood/PVC round block.complete for each outlet. I. Point wiring using class A materials b) Medium point above 3Mtr upto 6Mtr from tapping pointr to out let via switch								
		Each	2				2.00		
							2.00	405.78	**811.56**
44	Point wiring using copper wire with switch Supplying and wiring adopting loop system in existing PVC Conduit/casing caping using Copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixied on the exisiting plastic sheet /gang box, the pther end of the wires shall be terminated with sufficient loose length in a wood/PVC round block.complete for each outlet. I. Point wiring using class A materialsc)Long point above 6Mtr upto 10Mtr from tapping point to out let via switch								
		Each	6				6.00		

							6.00	587.04	**3522.24**
45	Supplying 6A flush/projected type socket and a 6 amps flush/ projected type SP switch either surface/flush mounting in a exisiting gang box or in a 4mm thick plastic sheet and fixing over a flush mounted wooden box and wiring using necessary capacity wires as required. b) 6Amps 3/5 way								
		Each	1				1.00		
							1.00	151.40	**151.40**
46	Wiring for lighting/power circuit using one of FLRS PVC insulated 1100v grade, multis and CopperWITH LOW conductor single core cable in open or consealed system of wiring.I Group A Materials.a) 1.5 sqmm								
		Mtr	1	140.00			140.00		
							140.00	26.78	**3749.20**
47	Wiring for lighting/power circuit using one of FLRS PVC insulated 1100v grade, multis and CopperWITH LOW conductor single core cable in open or consealed system of wiring.I Group A Materials.b)2.5Sqmm								
		Mtr	1	135.00			135.00		
							135.00	43.26	**5840.10**
48	Wiring for lighting/power circuit using one of FLRS PVC insulated 1100v grade, multis and CopperWITH LOW conductor single core cable in open or consealed system of wiring.I Group A Materials.c) 4 sqmm								
		Mtr	1	150.00			150.00		
							150.00	64.88	**9732.00**
49	Supplying 4mm thick plastic sheet with necessary niches for fixing switches, regulators etc., and fixing on exisiting wood or metal box using N.F.screws								
		Sq cm	1500				1500.00		
							1500.00	0.42	**630.00**
50	Supplying and fixing retrofit type -PL-LED lamp…W LED linear Source with CCT 6500 degree K, CRI>70%efficacy>80 lumen per watt,life>25000 burning hours and compliance to IS 10322/IEC 60598,LM 79 and LM80.The LED are driven by HF electronicdriver integrated in the system, with PF>0.95, power loss Should <5% of lam Wattage.,short Circuit and open circuit Protection to be integrated Circuit, THD less than 20%,life as per LM79.the operating input voltage should be between130 t 275 volts.Tested by NABL/CPRI accredited laboratory with 2 years Warranty agnist any manufacturing defect working under standard electrical condition.18-20Watts								
		Each	6				6.00		
							6.00	722.99	**4337.94**
51	Supplying and fixing of T5 Fluorescent Tube with 14W power consumption with low 3mg Mercury content & below 40% glass content than T8 lamp & 20% less phosphor coating than T8 with initial lumen on 1350 (for 3000-6500 deg Kelvin), rated Avg life (12 Hr. Cycle) of greater than 35000 burring hours. Operating voltage range from 180V to 265V, 50Hz AC power Supply								
		Each	4				4.00		
							4.00	145.22	**580.88**
52	Supply and fixing polished wood board made of not less than 15mm thick plank on both sides with plank made out of not more than 2 pices and fixing the same to the wall using tapered inverted woode plug screws etc., a)								
		Each	4				4.00		
							4.00	335.88	**1343.52**
53	Supplying and fixing of Procelain fuse channel with cut out on exisiting wooden/panel using necessary nuts, bolts and washers etc., complete.a) 32Amps								
		Each	6				6.00		
							6.00	248.21	**1489.26**
54	Supply of an load charge over switches 4poles 415v 50Hz A.C supply with AC23A duty a) up to 63amps Groups A								

		Each	1				1.00		
							1.00	5643.85	**5643.85**
55	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and C type curve indicator ON/OFF Energy cross 3 with short circuit breaking capacity of 10K and complete wiring as required. e)6-32amps TPN . Group A								
		Each	1				1.00		
							1.00	3135.02	**3135.02**
56	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and C type curve indicator ON/OFF Energy cross 3 with short circuit breaking capacity of 10K and complete wiring as required. 6-32amps TPN Group A								
		Each	1				1.00		
							1.00	1768.34	**1768.34**
57	Supplying, fixing and wiring Electronic Trivector Meter (ETV) 5 to 32/63 A three phase 4 wire whole current class-1 Accuracy Energy Meter.								
		Each	1				1.00		
							1.00	5875.58	**5875.58**
58	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipments on the meter board using 40mm dia 2.90 thick Gl pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proprotion of salt and charcoal 150mm alround the pipe to complete depth. the connection form the pipe to the conduit etc, is to be established through Gl wire of size as oer ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and checknuts etc, the pipe shall have 16 through holes of 12mm dia								
		Nos.	1				1.00		
							1.00	3614.95	**3614.95**
59	Supplying and running of GI/Copper strips for grounding connections using necessary fixing material as required GI strip 25x3mm								
		Mtr	1	20.00			20.00		
							20.00	84.45	**1689.00**
60	Supplying and fixing of class A (medium duty) Gl pipe of wall thick ness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV class. a) 40mm								
		Mtr	1	4.00			4.00		
							4.00	345.02	**1380.08**
61	Supplying and running of GI/Copper strips for grounding connections using necessary fixing material as required GI strip 25x3mm								
		Mtr	25				25.00		
							25.00	77.24	**1931.00**
62	Supplying of LT UG cable having aluminium conductor PVC insulated, sheathed, galvanished, steel wire/steel tap armoured cable with PVC outer sheating 1.1 KV class.I. Class 'A' PVC Cable.d) 4 core 16 sqmm								
		Mtr	25				25.00		
							25.00	154.49	**3862.25**
63	Labour charges for lying of 1.1 KV class UG cable when supplied agency in existing trench Gl pipe / stoneware pipe / on wall /on pole as required. I. In existing trench/duct.a) 6 sqmm to 16 sqmm								
		Mtr	25				25.00		
							25.00	12.24	**306.00**
64	Digging of trench of 0.6 m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc.,complete. .a) In soil (ordinary)								
		Mtr	20				20.00		

							20.00	78.27	**1565.40**
65	Supplying &fixing L.T.cast iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers ect.b) 16 Sqmm								
		Each	6				6.00		
							6.00	278.07	**1668.42**
66	Providing and fixing Precast RCC Slabs as Per approved design, specification and Direction Engineer-in-Charge.								
	Missing & damaged covering slabs	Sqm	230	0.90	0.60		124.20		
							124.20	2133.95	**265036.59**
								Total RS	**2197140.13**
							Add 18% of GST Charges		**395485.22**
67	Bescom Charges	L/S	1				**1.00**	18000.00	**18000.00**
68	Miscellaneous and Unforcean charges	L/S							374.64
								Grand Total RS	**2611000.00**

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum.
4) The estimate is based on S.R of 2023-2024, PWD Electrical SR 2023-24, Data Rates, Issused Rates and Corrigenda 1 & 2.

Assistant Engineer
Ward No-02

Assistant Executive Engineer
Yelahanka Sub Division
BBMP

Executive Engineer
Yelahanka Division
BBMP

Technical Sanction
Accorded For .....
Head of A/C...P-1878.....
CER NO :...09..... Dt:24/05/2024